



Solution

\$ 7,562
 + 2,716
 \$10,278 per semester

\$10,278 per semester
 x 2
 \$20,556 per year

$$\frac{86.5}{100} \times \frac{20,556}{\text{Base}}$$

$$(86.5)B = (20,556)(100)$$

$$B = \$23,764$$

1. What is the total annual costs associated with attending Penn State as a freshman living in the dormitory per year?

Cost per Semester

Tuition \$7,562

Room & Board: \$2,716

SHOW AND EXPLAIN YOUR WORK!

2. Underline the important mathematical and other terms in the information provided.

Explanation

Given Information

86.5% of the pie chart is "Tuition and R&B", and the balance is the cost of other things for the first year at college.

The actual costs are per semester, therefore after I summed TR&B, I must multiply by 2.

$$\frac{\text{Percent \#}}{100} = \frac{\text{Percentage}}{\text{Base}}$$

Cross Multiply & Solve for total

Total Cost for 1 Year

3. If the cost of books is \$1,152 per semester and there are 150 days on campus, how much spending money will you have on average per day?

\$23,764
 -20,556
 \$ 3,208 Total Spending \$ per year

\$3,208
 - 2,304 Total Books per year
 \$ 904 Spending Money per year

\$904 divided by 150 = \$6 per day.

Total cost minus the TR&B gives the total spending \$ for the year.

The books costs must be multiplied by two for 2 semesters.

Subtract this number from the Total spending money.

Then divide by the number of days.

I can spend \$6 per day.